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A new understanding of gravity and particles voids the need for dark matter

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The gravitational redshift, as originally proposed by Einstein, has light emitted from atoms deeper in a gravitational potential redshifted. The frequencies of atoms slow in proportion to the fractional decrease in stored energy when the field from surrounding mass increases. Gravitational attraction arises from a loss in mass (stored energy) when closer to other massive bodies. The decrease in mass, as light-speed increases, is released as kinetic energy of motion. Neither emission of radiation nor an increased distortion of spacetime is required. The change in clock-rate is demanded by the change in energy. No change in 'space'(distance scale) is needed.
The gravitational redshift of distant galaxies is not an expansion of the scale of empty space. It simply reflects the lower energy held by matter going back in time when light-speed was faster. Correcting the supernovae data of the Dark Energy Survey for the faster light-speed accurately removes the accelerating expansion. Moreover, there is no need for any expansion at all. Consequences include - no need for dark energy, or an initial big bang, or cosmic inflation, or dark matter, or singularities inside black holes. The Hubble tension and the horizon and flatness problems are also removed. However, the revised theory still reproduces the many apparent successes of General Relativity.
Massive particles can be seen as non-diffusing 3-D standing-wave patterns of mixed chiral components in which energy is continuously conserved. They oscillate in a background medium from nearly equal contributions from matter and antimatter. Inertia then arises from rotations induced by any asymmetry. The 1/R dependence of gravitational potential, the separation into gravitationally isolated interlaced regions of matter and antimatter, and why distant galaxies dominate, follow. The flat rotation curves, magnitude of gravitational lensing, rate of galaxy evolution, and the cosmic microwave background, do not need dark matter.

Author: Dr LAMB, PETER

Presenter: Dr LAMB, PETER

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